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Online qualitative methods – challenges and opportunities

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Introduction

A growing proportion of the population are spending an increasing amount of time online (Poushter, 2016) and engaging in a wide variety of online activities (Blank & Groselj, 2014). Communication is one of the most common, with email, for example, being used by over 90% of UK adults (Blank & Groselj, 2014), and other forms of ‘computer mediated discourse’ (Herring & Androutsopoulos, 2015) including private, ‘direct messages’ sent between individuals through applications such as Whatsapp or Facebook messenger, also being widely used (Oghuma, Libaque-Saenz, Wong & Chang, 2016). Thus, there are many efficient and convenient avenues of online communication via which primary qualitative data can be collected; such as online interviews through text-based or video-based chat, or online qualitative surveys.

There are also abundant opportunities to gather pre-existing data from the Internet, for qualitative analysis. Many popular online activities, such as social networking, production of online material, and blogging (Blank & Groselj, 2014) produce a trail of textual or graphical information about peoples' experiences, thoughts, and behaviours. When this type of information is located in online spaces within the public domain (i.e. in places where it is reasonable to assume that the individual depositing it would expect it to be publicly visible to other users of the Internet) there is potential for researchers to tap into this wealth of secondary data (Coulson, 2015).

Despite the huge potential of the Internet for providing access to both primary and secondary qualitative data, there are a number of apprehensions surrounding online research. This article summarises common concerns associated with a range of online qualitative approaches, whilst also drawing attention to benefits and opportunities. Key insights from research into online behaviour, that may help researchers considering employing these approaches, are also presented. While this article focuses on a selection of relatively common, well-established online qualitative methods, it is important to note that there are also many exciting and innovative methods being developed and implemented, such as virtual interviews and focus groups, and readers are directed towards Braun, Clarke and Gray (2017) for a comprehensive recent account of these and other online qualitative methods.

Sampling bias

Online data collection increases access to participants who are geographically dispersed; and can facilitate the inclusion of people for whom physical or psychological difficulties make participation in face-to-face data collection difficult (e.g. Ison, 2009). However, data collected online is inevitably prone to a certain degree of sampling bias. Coulson (2015) discusses the ongoing debate around this issue; and highlights statistics estimating that over 90% of the UK population have Internet access, meaning it is becoming increasingly possible to access the majority of people (at least in the UK), within online environments (Coulson, 2015). Admittedly, this is still not complete saturation, and while *access* is steadily growing, there are still differences in how much time different demographics spend online, and what they do online (e.g. Scott, Bay-Cheng, Prince, Nochajski & Collins, 2017), meaning that certain groups of people will nonetheless likely be over- or under-represented. While it is important to take this into account, it is worth noting that *offline* research using non-probability samples is subject to similar biases (see e.g. Blair & Zinkhan, 2006), and using a variety of recruitment methods to mitigate against this is good practice in both online and offline environments.

Offline qualitative research frequently uses purposive sampling methods to recruit a variety of participants within the target population (Palinkas et al., 2015), and this approach can also be applied online, by targeting participants with specific features or experiences (e.g. problematic substance use) through online networks (Barratt, Ferris & Lenton, 2015). Using probability sample data in conjunction with data collected with online purposive samples to explore a given research question can maximise the complementary benefits of different

means of recruitment and data collection (Barratt et al., 2014). Robinson (2014) presents a detailed overview of the issues involved in sourcing samples for qualitative research both online and offline.

Reporting bias

When examining secondary qualitative data, such as that gathered from online forums (see BPS, 2017, and Smedley & Coulson, 2018 for detailed explanation of ethical guidelines surrounding this approach), the fact that the discussion is ‘naturally occurring’, and not driven by the researcher, can actually be expected to reduce the likelihood of certain types of response bias (Smith et al., 2017; Smedley & Coulson, 2018). However, there is likely to be bias in terms of when and why people choose to post on forums; for example, they likely frequent health-related forums more during periods of ill-health than when feeling well (Smedley & Coulson, 2018). However, as long as these biases are acknowledged, there is no reason to discount the data. Depending on the research question, these biases may even be a feature for analysis.

Smith et al. (2017) describe how they gathered a rich body of pre-existing qualitative data on online parenting forums; and highlight many advantages to this method. However, they also reflect on mixed reactions from other academics, with some scepticism being directed towards the quality of the data; i.e. concerns about its truthfulness, and about the researchers’ lack of knowledge about the makeup of the sample (Smith et al., 2017). They advise researchers using online forum data to give comprehensive accounts of the context

in which it was gathered when disseminating the findings, to maximise credibility (Smith et al., 2017). The recent practical guide by Smedley and Coulson (2018) provides useful advice to support best practice when sourcing and interpreting data from online forums.

Truthfulness of information

Reflecting on reactions to data they collected from online forums, Smith, Bulbul and Jones (2017) challenge the preconception that the data are less credible than offline forms of written qualitative data; such as diaries. Regardless of the method of data collection, researchers are arguably always at the mercy of participants' honesty. But are there valid reasons to expect information gathered online will tend to be less truthful than that gathered offline?

One specific phenomenon that online researchers should be aware of is 'trolling'; the posting of inflammatory, and often deliberately false, statements in public online spaces, with the specific intention of generating a reaction from others (Binns, 2012). Often, the troll does not genuinely subscribe to the opinion they express, and if a thematic analysis, for example, were being conducted, it could be misleading to analyse 'troll' data at face value using a purely semantic approach. Depending on the aims of the research, it may be appropriate to either filter out the data; or to utilise latent coding, so that the researcher can apply discretion in interpreting the meaning behind the troll posts. How easy this is to do will depend upon how subtle the trolling is. Some hold the view that trolls are easy to identify, but this is not always the case (Coles & West, 2016). If a researcher suspects a

forum member to be trolling a thread that they are analysing, it may be useful to investigate the posts made by the same member across a selection of other threads, to help inform their assessment. It is worth noting that trolling, along with other aggressive online communication styles such as 'flaming' should not necessarily be ignored or dismissed as obstacles, as they can be informative in their own right, and are actually of particular interest in critical discursive approaches (e.g. Jowett, 2015).

Trolling aside, for the majority of Internet users, the online environment can actually encourage greater honesty and openness than face-to-face encounters, thanks to the 'online disinhibition effect;' the tendency for people to behave in less inhibited ways when they are online (Suler, 2004). While this can be negative (e.g. in the case of more uncivil discourse, such as trolling), the benign online disinhibition effect relates to a positive manifestation, in which features of the online realm - including anonymity, invisibility, and lack of eye contact, encourage people to disclose more personal information online than offline (Lapidot-Lefler & Barak, 2015). Socially-desirable responding in research studies has also been found to be reduced in online, compared with offline, environments (Joinson, 2001). The benefits to the qualitative researcher of open, uninhibited disclosure are evident, but ensuring participants are fully informed of their right to withdraw (at least in research collecting primary data) may be of particular importance, in case participants, post-interview, feel they have shared more than they intended.

Lack of non-verbal information

Much primary and secondary data collected online is acquired through predominantly text-based channels, such as emails, direct messaging, and posts on blogs, forums, or social networking sites (Coulson, 2015). While missing typical non-verbal information encountered in a face-to-face context, such as tone of voice and body language, there are many other ways in which individuals can and do enrich their online communications, which go beyond the words they choose. The term 'textual paralanguage' has been defined as 'written manifestations of nonverbal audible, tactile, and visual elements that supplement or replace written language and that can be expressed through words, symbols, images, punctuation, demarcations, or any combination of these' (Luangrath, Peck, & Barger, 2017, p1-2).

Emojis are a particularly obvious example of this; used frequently online in order to express not just emotional states but also linguistic intentions within text-based communications, such as sarcasm or humour (Kaye, Malone & Wall, 2017; Dresner & Herring 2010).

Researchers planning to communicate with participants via text-based online communication may find it valuable to consider whether the interface they use permits use of emojis. Depending on the topic of the research, and the likelihood that the participants are emoji users, it may, therefore, be worth considering favouring an interface that permits emoji use. While emoticons (where the ASCII keyboard keys are used to represent basic faces, rotated ninety degrees) can be used in any text-based setting, emojis (the colourful images, including a wide range of facial expressions, animals, plants, and various objects) are typically more specific to instant messaging applications, and tend to be perceived as more visually appealing, clearer and more meaningful than emoticons (Rodrigues, Prada, Gaspar, Garrido, & Lopes, 2018).

Beyond emojis, subtler paralinguistic devices such as punctuation used in non-standard ways, are also often apparent in text-based online communications (Luangrath et al., 2017). The use of a full stop after each word of a sentence to add emphasis, is just one example of this that is popular in social media posts. For those Internet users who are adept users of paralinguistic devices, online textual conversations are arguably becoming as nuanced in their non-verbal content as offline face-to-face interactions. In order to be able to interpret online textual communications in their full richness, and also to communicate in ways that one's participants can relate to, it is beneficial for qualitative researchers working online to be, or become, familiar with various forms of textual paralanguage. There is also an interesting practical benefit to this aspect of online communication; Luangrath et al. (2017) note that textual paralinguistics online are more explicit and visible than non-verbal face-to-face cues, which are often subtle, and only subconsciously picked up. Because of this, qualitative researchers can more easily record and analyse non-verbal cues when they are expressed online via textual paralanguage, than when they are expressed face-to-face through body language or facial expression.

There is also evidence that text-based online interactions can be a more comfortable means of communication for individuals with disorders that make face-to-face interactions difficult, such as social anxiety (D'Arcy Jr, Stiles, & Hanley, 2016) and autism spectrum disorders (Sehlin, Ahlström, Andersson, & Wentz, 2018), or for any participant discussing particularly sensitive issues (Pearce, Thøgersen-Ntoumani, & Duda, 2017). They also enable researchers to engage with participants who have impairments in verbal communication (Ison, 2009).

However, they are not likely to be appropriate for all individuals – such as those with low literacy (and/or digital literacy), for example (Pearce et al., 2017).

Barriers to naturalistic communication

Online video interviewing, e.g. via 'Skype' (Janghorban, Roudsari & Taghipour, 2014) combines the convenience of remote communication with the richness of visual, non-verbal cues (Sullivan, 2012; Iacono, Symonds & Brown, 2016), which can be very informative in qualitative research (Ryan, Coughlan & Cronin, 2009). However, it is also important to consider recent research that suggests people do not necessarily feel the same, or behave in the same way, when conversing via video link as they do in face-to-face interactions. Weller (2015) describes how both participants and interviewers can experience Skype interviews differently from those conducted in-person. Some participants reported feeling more relaxed and less pressured during video interviews, but there were also some limitations, such as a perception of lack of genuine eye contact (Weller, 2015).

Difficulty establishing a sense of eye contact is a frequently-cited limitation of online video communications (e.g. Iacono et al., 2016), and is caused by the discrepancy between the camera position and the centre of the screen - where users look to view the person they are conversing with. However, it is possible to create a better approximation of eye contact for the other party by looking at the camera rather than centre-screen (Fullwood & Morris, 2013). This is a very straightforward tactic that has been linked with more positive impressions (Fullwood & Morris, 2013), which researchers could employ to put participants

at ease. It is also likely that this issue will become less problematic with the development of technology to correct for disparity of gaze (e.g. Kuster, Popa, Bazin, Gotsman & Gross, 2012). Interestingly, Iacono et al. (2016) reflect that for individuals who are shy, reduced direct eye contact can potentially be experienced as a positive feature, so finding out participants' personal preferences before making adjustments is advisable.

When collecting primary qualitative data online, particularly through text-based interviews, interactions with participants can be synchronous (with both parties online simultaneously and responding to one another in real-time), or asynchronous (with messages sent after a delay of variable length, with each party responding at their convenience). Because face-to-face interviews are synchronous, one might assume that asynchronous discourses are less naturalistic, and inferior to those carried out in 'real-time'. Indeed, there is evidence that synchronicity of online exchanges can enhance 'social presence' and be perceived more positively than asynchronous communications (Park & Sundar, 2014). However, there are also benefits to asynchronous messaging (Ratislavová, & Ratislav, 2014). Individuals can take their time to contemplate their responses, which may (a) give them time to fully consider how they feel about something, and (b) enable them to find a way to articulate their feelings or experiences in a way that they feel satisfied with. A practical advantage of asynchronous messaging, is that if a participant is asked for factual information, they can check details rather than making a less accurate estimate under pressure.

How individuals perceive (a)synchronicity in online communication varies considerably, with expectations around response times varying (Darics, 2014). There are also individual

differences in preferences for different methods; for example, young people tend to use more synchronous methods than older people (Taipale, 2016). This demonstrates that asynchronicity can be either a challenge or an opportunity, and that discussing preferences and expectations around the use of a/synchronous communication with participants individually, in advance, may be beneficial.

Conclusion

There are considerable advantages to the use of online spaces for collecting qualitative data, not only in terms of cost and time, but also in terms of access to a wide range of individuals, who may feel able to disclose more openly than in offline scenarios. However, people's online behaviour can differ from their behaviour in the offline world, and it is important to consider the factors that influence people's online interactions when employing various online qualitative approaches. This paper has described a number of common challenges in online qualitative research, with examples of methodologies that they apply to; drawn attention to findings from previous research that can inform researchers facing these challenges; and also highlighted a range of benefits that online qualitative research can afford. It is hoped that this brief overview of issues will be a useful starting point for researchers contemplating the use of online qualitative methods.

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